

Claims

1. A peak expiratory flow meter capable of measuring continuous expiratory flow, comprising:

5 a lower casing unit including a first body formed to have an open top and open opposite sides and to have a first end in which a first expiratory flow entrance is formed to be integrated with the first body so as to allow an asthma patient to hold the first expiratory flow entrance in his or her mouth, a plurality of rails arranged
10 on a top of the first body adjacent to a second end of the first body, and a movable plate fitted on the rails;

an air expansion unit including a pressure transfer tube arranged on a side of the first expiratory flow entrance, an elastic plate fitted on the pressure transfer
15 tube, and a pressure spring comprised of a first end that is mounted to the elastic plate and a second end that is mounted on a first side surface of the movable plate; and

an upper casing unit including a second body coupled with the first body, adapted to define the air expansion
20 unit and provided with a first end in which a second expiratory flow entrance corresponding to the first expiratory flow entrance is formed to be integrated with the second body, and a measurement slot formed on a side of the second expiratory flow entrance and extended to a
25 portion of the second body adjacent to a second end of the

second body, and a scale indicator formed to have a "T" shape and to have an upper portion exposed to outside of the measurement slot, and hung on a top of the second body and a lower portion supported on an upper portion of a
5 second side surface of the movable plate (122), the scale indicator being moved by the movable plate (122).

2. The peak expiratory flow meter according to claim 1, wherein the rails have ends that are fixedly arranged by supporting projections (120) vertically extended from a
10 bottom surface of the first body.

3. The peak expiratory flow meter according to claim 1, wherein the first expiratory flow entrance has a pressure transfer hole that is formed on a side thereof to penetrate through a bottom surface of the first body.

15 4. The peak expiratory flow meter according to claim 3, wherein the pressure transfer tube includes a first transfer tube that is formed to have a closed top and an open bottom to penetrate from the top of the first body through the pressure transfer hole, and a second transfer
20 tube that is extended from an outer circumference of the first transfer tube, arranged in the first body, to be radially broadened towards the movable plate while communicating with the first transfer tube, and then

mounted to the elastic plate, the pressure transfer hole being tightly fitted around the first transfer tube, which passes therethrough, without circulation of air therebetween.

5 5. The peak expiratory flow meter according to claim 4, wherein the first transfer tube extended to an outside of the first body is selectively connected to any one of a typical pressure sensor and a typical electronic circuit for signal analysis, thus performing spirometry.

10 6. The peak expiratory flow meter according to claim 4, wherein the elastic plate includes a mounting cavity that is formed in a portion thereof to allow an extending part of the second transfer tube to be fitted into the mounting cavity, the second transfer tube being tightly
15 fitted into the mounting cavity without circulation of air therebetween.

 7. The peak expiratory flow meter according to claim 1, wherein the measurement slot is formed to penetrate through the top of the second body, the second body having
20 a scale indicated to both sides of the measurement slot.